



SEQUENCE LISTING

<110> FAN HONG, GUO
YANG, YONGJIE
ZHU, JIA

<120> LOW TEMPERATURE CYCLE EXTENSION OF DNA WITH HIGH
POLYMERIZATION SPECIFICITY

<130> LEE 113

<140> 09/878,131

<141> 2001-06-08

<160> 21

<170> PatentIn Ver. 2.1

<210> 1

<211> 1764

<212> DNA

<213> Bacillus stearothermophilus.

<400> 1

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ccaacatggt atgatgcaa ataa 1764
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 <212> PRT
 <213> Bacillus stearothermophilus

<400> 2

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Val	Met	Glu	Glu	Asn	Tyr	His	Asp	Ala	Pro	Ile	Val	Gly	Ile	Ala	Leu
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Val	Asn	Glu	His	Gly	Arg	Phe	Phe	Met	Arg	Pro	Glu	Thr	Ala	Leu	Ala
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Glu	Leu	Arg	Gly	Val	Ala	Phe	Asp	Leu	Leu	Ala	Ala	Tyr	Leu	Leu	
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Glu Lys Leu Ala Pro His His Glu Ile Val Glu Asn Ile Leu His Tyr
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 325 330 335
 Pro Ile Arg Leu Glu Glu Gly Arg Lys Ile Arg Gln Ala Phe Val Pro
 340 345 350
 Ser Glu Pro Asp Trp Leu Ile Phe Ala Ala Asp Tyr Ser Gln Ile Glu
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 Leu Arg Val Leu Ala His Ile Ala Asp Asp Asp Asn Leu Ile Glu Ala
 370 375 380
 Phe Gln Arg Asp Leu Asp Ile His Thr Lys Thr Ala Met Asp Ile Phe
 385 390 395 400
 Gln Leu Ser Glu Glu Glu Val Thr Ala Asn Met Arg Arg Gln Ala Lys
 405 410 415
 Ala Val Asn Phe Gly Ile Val Tyr Gly Ile Ser Asp Tyr Gly Leu Ala
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 Gln Asn Leu Asn Ile Thr Arg Lys Glu Ala Ala Glu Phe Ile Glu Arg
 435 440 445
 Tyr Phe Ala Ser Phe Pro Gly Val Lys Gln Tyr Met Glu Asn Ile Val
 450 455 460
 Gln Glu Ala Lys Gln Lys Gly Tyr Val Thr Thr Leu Leu His Arg Arg
 465 470 475 480
 Arg Tyr Leu Pro Asp Ile Thr Ser Arg Asn Phe Asn Val Arg Ser Phe
 485 490 495
 Ala Glu Arg Thr Ala Met Asn Thr Pro Ile Gln Gly Ser Ala Ala Asp
 500 505 510
 Ile Ile Lys Lys Ala Met Ile Asp Leu Ala Ala Arg Leu Lys Glu Glu
 515 520 525
 Gln Leu Gln Ala Arg Leu Leu Leu Gln Val His Asp Glu Leu Ile Leu
 530 535 540
 Glu Ala Pro Lys Glu Glu Ile Glu Arg Leu Cys Glu Leu Val Pro Glu
 545 550 555 560
 Val Met Glu Gln Ala Val Thr Leu Arg Val Pro Leu Lys Val Asp Tyr
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His Tyr Gly Pro Thr Trp Tyr Asp Ala Lys
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<210> 3
<211> 1764
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Modified Bst
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gatgccccga ttgtcggaaat cgcactagtg aacgagcatg ggcgattttt tatgcgcccc 180
gagaccgcgc tggctgattc gcaattttta gcatggcttg ccgatgaaac gaagaaaaaa 240
agcatgtttg acgccaagcg ggcagtcgct gccttaaagt ggaaaggaat tgagcttcgc 300
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gatatcgctg cgggtggcgaa aatgaaacaa tatgaagcgg tgcggtcgga tgaagcggtc 420
tatggcaaaag gcgtcaagcg gtcgctgccg gacgaacaga cgcttgctga gcatctcgct 480
cgcaaagcgg cagccatttg ggcgcttgag cagccgttta tggacgattt gcggaacaac 540
gaacaagatc aattattaac gaagcttgag cacgcgctgg cggcgatttt ggctgaaatg 600
gaattcactg ggggtgaacgt ggatacaaaag cggcttgaac agatggggtc ggagctcgcc 660
gaacaactgc gtgccatcga gcagcgcatt tacgagctag ccggccaaga gttcaacatt 720
aactcaccaa aacagctcgg agtcatttta tttgaaaagc tgcagctacc ggtgctgaag 780
aagacgaaaa caggctattc gacttcggct gatgtgcttg agaagcttgc gccgcatcat 840
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gaaggattgt tgaaagtgtg gcgccttgat accggcaaaag tgcatacgat gttcaaccaa 960
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cggacggcca tgaacacgcc aattcaagga agcgccgctg acattattaa aaaagcgatg 1560
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Modified Bst
amino acid sequence

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 35 40 45
 Leu Val Asn Glu His Gly Arg Phe Phe Met Arg Pro Glu Thr Ala Leu
 50 55 60
 Ala Asp Ser Gln Phe Leu Ala Trp Leu Ala Asp Glu Thr Lys Lys Lys
 65 70 75 80
 Ser Met Phe Asp Ala Lys Arg Ala Val Val Ala Leu Lys Trp Lys Gly
 85 90 95
 Ile Glu Leu Arg Gly Val Ala Phe Asp Leu Leu Leu Ala Ala Tyr Leu
 100 105 110
 Leu Asn Pro Ala Gln Asp Ala Gly Asp Ile Ala Ala Val Ala Lys Met
 115 120 125
 Lys Gln Tyr Glu Ala Val Arg Ser Asp Glu Ala Val Tyr Gly Lys Gly
 130 135 140
 Val Lys Arg Ser Leu Pro Asp Glu Gln Thr Leu Ala Glu His Leu Val
 145 150 155 160
 Arg Lys Ala Ala Ala Ile Trp Ala Leu Glu Gln Pro Phe Met Asp Asp
 165 170 175
 Leu Arg Asn Asn Glu Gln Asp Gln Leu Leu Thr Lys Leu Glu His Ala
 180 185 190
 Leu Ala Ala Ile Leu Ala Glu Met Glu Phe Thr Gly Val Asn Val Asp
 195 200 205
 Thr Lys Arg Leu Glu Gln Met Gly Ser Glu Leu Ala Glu Gln Leu Arg
 210 215 220
 Ala Ile Glu Gln Arg Ile Tyr Glu Leu Ala Gly Gln Glu Phe Asn Ile
 225 230 235 240
 Asn Ser Pro Lys Gln Leu Gly Val Ile Leu Phe Glu Lys Leu Gln Leu
 245 250 255
 Pro Val Leu Lys Lys Thr Lys Thr Gly Tyr Ser Thr Ser Ala Asp Val
 260 265 270
 Leu Glu Lys Leu Ala Pro His His Glu Ile Val Glu Asn Ile Leu His
 275 280 285
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<210> 5
<211> 17
<212> DNA
<213> Artificial Sequence
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<220>

<223> Description of Artificial Sequence: Primer

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<210> 6

<211> 16

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

<400> 6

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<210> 7

<211> 19

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

<400> 7

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<210> 8

<211> 17

<212> DNA

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<223> Description of Artificial Sequence: Primer

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<210> 9

<211> 17

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

<400> 9

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<210> 10

<211> 17

<212> DNA
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<223> Description of Artificial Sequence: Primer

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<210> 11
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<400> 11
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<210> 12
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<400> 12
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<220>
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<400> 18
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<210> 19
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<210> 20
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Illustrative
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 <222> (40)
 <223> a, t, c, g, other or unknown

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 <222> (41)
 <223> a, t, c, g, other or unknown

<220>
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 <222> (43)..(44)
 <223> a, t, c, g, other or unknown

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 <223> a, t, c, g, other or unknown

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<210> 21
 <211> 53
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Illustrative
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